

FIG. 1

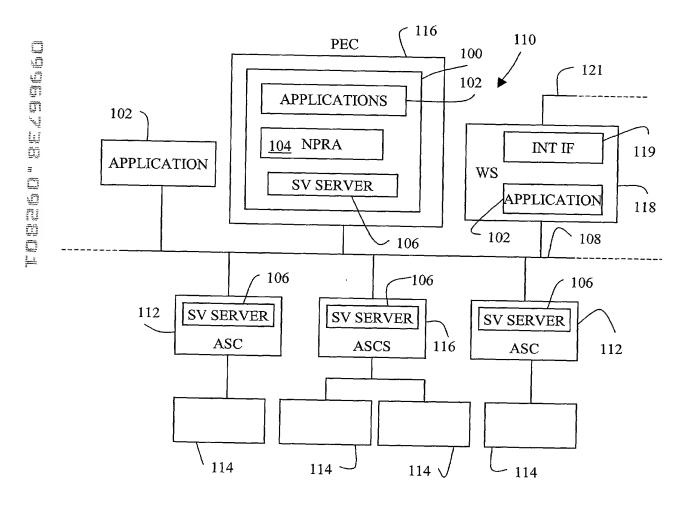


FIG. 2

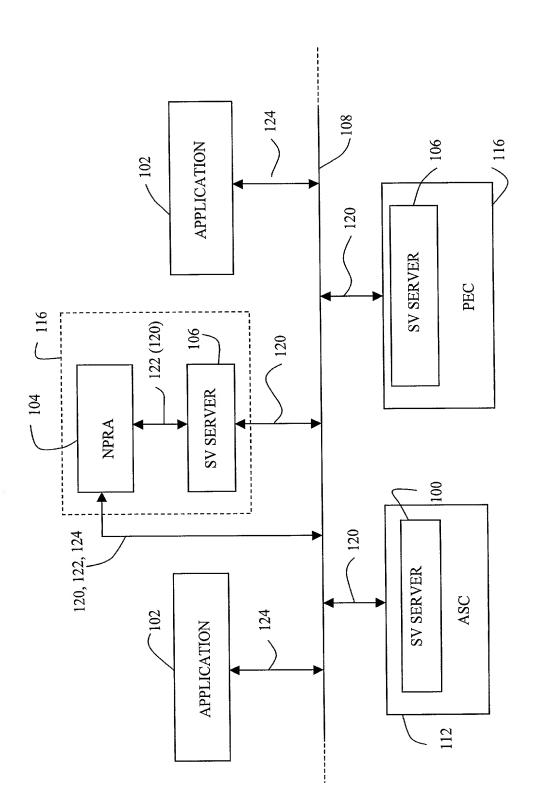
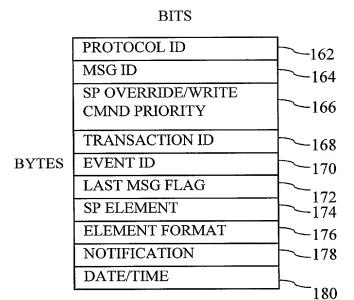


FIG. 3

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136 130 128 132 134 -126 SV**OVER** SVT **PUID VUID NAME ADDRESS ENABLE** 142 140 144 -146 138 **PWR** DEF WRT **FAIL QUALITY WRITABLE POLL PRIORITY ACT CYCLE** 14,8 158 154 156 1,50 152 DEF SPT STRING **OVRD ELEMENT SPT** COV **PRIORITY VALUE** VALUE **NMBR** LIMIT 160 **USER DEFINED USER DEFINED** 

FIG. 4



**FIG. 5** 

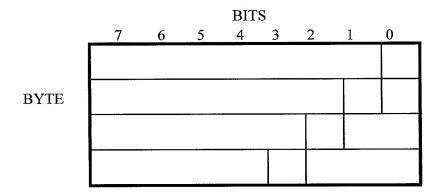


FIG. 6

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BITS

7 6 5 4 3 2 1 0 PROT\_ID\_SP 0 MSG\_ID\_SP\_DISCOVER\_PUID 1 2 TRANSACTION ID – MSB 3 4 TRANSACTION ID - LSB **BYTES** 5 6 PUID - MSB 7 8 9 PUID- LSB

**FIG. 7** 

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# BITS

		7	6	5	4	3	2	1	0	
	0	PROT_ID_SP								
	1	MS	MSG_ID_SP_DISCOVER_NAME							
	2	TR	TRANSACTION ID – MSB							
BYTES	3					-				
DITES	4		-			_				
	5	TRANSACTION ID – LSB								
	6	NAME[0]								
	•••									
	41	NA	ME[	[35]						

**FIG. 8** 

**BYTES** 

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# BITS

### 7 6 5 4 3 2 1 0

	7	6	5	4	3	2	1	0		
0	PRO	T_I	D_S	P						
1	MSG_ID_SP_SUBSCRIBE_EL									
2	TRANSACTION ID – MSB									
3										
4										
5	TRANSACTION ID – LSB									
6	PUI	D –	MSI	В			-			
7	-	-								
8										
9	PUID- LSB									
10	SP ELEMENT INDEX									
11	COV NOTIFICATION									
	COQ NOTIFICATION									
	COS NOTIFICATION									
	CO		ICA'	TIO	N	X				
					X		NC, LLI		ISYI }	4C
				X	AN	IY/A	LL			
		$\triangleright$	1	POL	LIN	G/CC	OV			
12	$\geq$	U	SE_	DEF	AUI	LT				
13	RE	POF	RT F	ORI	MAT					
•••	CC	V L	IMI'	Γ/Ρ(	OLL	RAT	E –	MS	SB	
16	<u> </u>		-	• •	•		*			
17	CC	V L	IMI	Γ/Ρ(	OLL	RAT	E –	LS	В	
	PO	LL	SYN	СТ	IME	$-\mathbf{M}$	SB			
18				• • •						
	PC	LL	SYN	IC T	IME	-LS	SB			

FIG. 9

Soemo et al. Greer, Burns & Crain, Ltd. (B. Joe Kim) Ref. No. 2001P18038US Sheet 9 of 24 (312) 360 0080 4 3 2 7 5 1 0 PROT\_ID\_SP 0  $MSG\_ID\_SP\_UNSUBSCRIBE\_EL$ 1 TRANSACTION ID - MSB 2 3 4 5 TRANSACTION ID - LSB 6 PUID - MSB 7 8 9 PUID - LSB SP ELEMENT INDEX 10 DISABLE COV 11 DISABLE COQ **DISABLE COS** DISABLE COT UNUSED

A PROPRIETARY PROTOCOL FOR . . .

FIG. 10

BITS

7 6 5 4 3 2 1 0

PROT\_ID\_SP

1 MSG\_ID-SP\_UNSUBSCRIBE\_ALL\_EL

**FIG. 11** 

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# BITS

	7 6 5 4 3 2 1 0
0	PROT_ID_SP
1	MSG_ID_SP_OVERRIDE_WRITE_SP
2	TRANSACTION ID - MSB
3	
4	
5	TRANSACTION ID - LSB
6	PUID - MSB
7	
8	
9	PUID - LSB
10	OVERRIDE/WRITE
	OVERRIDE/WRITE PRIORITY
11	OPERATOR ID[3]
14	OPERATOR ID[3]
15	SPF
16	ELEMENT[0] VALUE - MSB
17	
18	
19	ELEMENT[0] VALUE - LSB
XX	ELEMENT[n] VALUE - MSB
	ELEMENT[n] VALUE - LSB
	1 2 3 4 5 6 7 8 9 10 11 14 15 16 17 18 19

FIG. 12



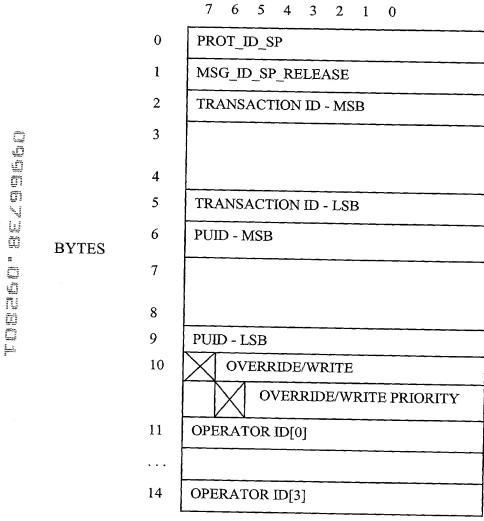


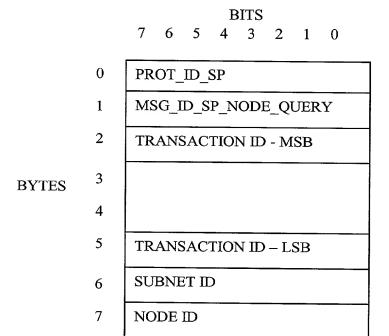
FIG. 13

# BITS 7 6 5 4 3 2 1 0 PROT\_ID\_SP 0 MSG\_ID\_SP\_VAL\_QUERY 1 TRANSACTION ID - MSB 2 3 4 TRANSACTION ID - LSB PUID - MSB **BYTES** 6 7 8 PUID- LSB 9 REPORT FORMAT 10 MIN WRITE PRIORITY 11 MIN OVERRIDE PRIORITY 12

**FIG. 14** 

# 6 5 4 3 2 1 0 PROT\_ID\_SP 1 MSG\_ID\_SP\_QUAL\_QUERY 2 TRANSACTION ID - MSB 3 4 5 TRANSACTION ID - LSB PUID - MSB **BYTES** 7 8 9 PUID- LSB 10 REPORT FORMAT 11 QUALITY MASK - MSB 12 **QUALITY MASK - LSB**

**FIG. 15** 



**FIG. 16** 

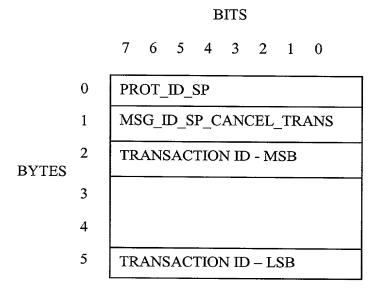
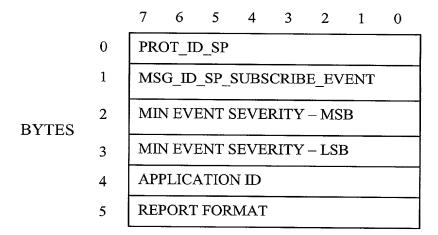


FIG. 17



**FIG. 18** 

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**FIG. 19** 

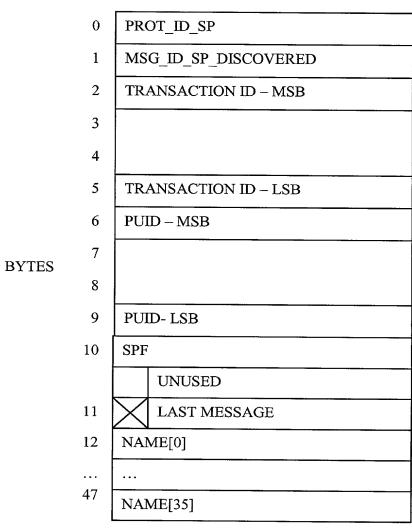
**FIG. 20** 

7 6 5 4 3 2 1 0

	0	PROT_ID_SP
	1	MSG_ID_SP_EVENT_RPT
BYTES	2	EVENT ID – MSB
	3	EVENT ID – LSB
	4	EVENT SEVERITY – MSB
	5	EVENT SEVERITY – LSB
	6	EVENT TIME STAMP - MSB
	•••	
	13	EVENT TIME STAMP - LSB
	14	ARG LENGTH
	15	ARG[0]
	•••	
	XX	ARG[N]

FIG. 21

BITS 7 6 5 4 3 2 1 0



**FIG. 22** 

		7 6 5 4 3 2 1 0 BIT	ΓS
	0	PROT_ID_SP	
	1	MSG_ID_SP_VAL_RPT_0	
	2	TRANSACTION ID	
	3		
	4		
	5	TRANSACTION ID – LSB	
	6	PUID – MSB	
	7		
	8		
	9	PUID – LSB	
	10	COV NOTIFICATION	
		COQ NOTIFICATION	
		UNUSED	
BYTES		LAST MESSAGE	
	11	QUALITY – MSB	
	12	QUALITY – LSB	FIG. 23
	13	SP WRITE PRIORITY	
	14	SP OVERRIDE PRIORITY	
	15	SPF	
	16	ELEMENT[0] VALUE - LSB	
	17		
	18		
	19	ELEMENT[0] VALUE – LSB	
	•••		
	XX	ELEMENT[n] VALUE – MSB	
		ELEMENT[n] VALUE - LSB	

**BYTES** 

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## BITS

0	PROT_ID_SP
1	MSG_ID_SP_VAL_RPT_1
2	TRANSACTION ID – MSB
3	
4	
5	TRANSACTION ID – LSB
6	PUID – MSB
7	
8	
9	PUID – LSB
10	cov
	coq
	UNUSED
	LAST MESSAGE
11	QUALITY – MSB
12	QUALITY – LSB
13	SP WRITE PRIORITY
14	SP OVERRIDE PRIORITY
15	NAME[0]
•••	
50	NAME[35]
51	SPF
52	ELEMENT VALUE[0]
•••	
XX	ELEMENT VALUE[N]

**FIG. 24** 

7 6 5 4 3 2 1 0

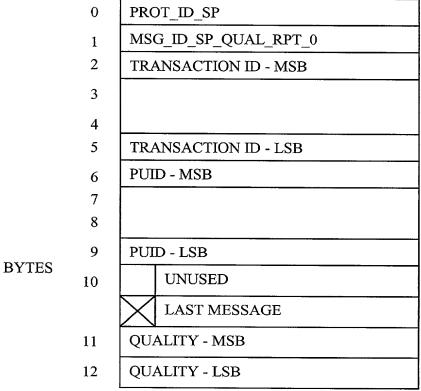
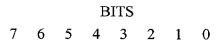


FIG. 25

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	0	PROT_ID_SP
	1	MSG_ID_SP_QUAL_RPT_0
	2	TRANSACTION ID - MSB
	3	
	4	
	5	TRANSACTION ID - LSB
	6	PUID - MSB
	7	
BYTES	8	
BIILS	9	PUID - LSB
	10	UNUSED
		LAST MESSAGE
	11	QUALITY – MSB
	12	QUALITY – LSB
	13	NAME[0]
	•••	
	48	NAME[35]

**FIG. 26** 

### 7 6 5 4 3 2 1 0 PROT\_ID\_SP 0 1 MSG\_ID\_SP\_EVENT\_RPT ORIGINATRO SUBNET ID 2 3 ORIGINATOR NODE ID 4 APPLICATION ID 5 EVENT ID - MSB 6 EVEMT ID - LSB **BYTES** 7 **EVENT SEVERITY - MSB** 8 EVENT SEVERITY - LSB 9 **EVENT TIME STAMP - MSB EVENT TIME STAM - LSB** 16 17 **ARG LENGTH** 18 ARG[0] XXARG[N]

FIG. 27

# PROT\_ID\_SP MSG\_ID\_SP\_APPLICATION\_ERROR MODULE - MSB MODULE - LSB ERROR CODE - MSB ERROR CODE - LSB ORIGINAL MESSAGE (FIRST BYTE)

**BITS** 

0

1

2

3

4

5

6

...

n

**BYTES** 

**FIG. 28** 

ORIGINAL MESSAGE (LAST BYTE)